

John T. Greeves, Director

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If you have any questions concerning this memorandum, please call Frank Wenslawski of my staff at (925) 975-0219.

Attachments:

As stated

cc w/attachments::

Regional Administrator

JTBuckley, NMSS/DWM (T7F27)

RI-Bangart, OSP

PFGoldberg, NMSS/IMNS (T8F5)

CLCain

LLHowell

DSimpkins

FAWenslawski, WCFO

HDChaney, WCFO

NMIB Files

NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-8064

July 1, 1998

MEMORANDUM TO: John T. Greeves, Director  
Division of Waste Management/NMSS

FROM: Ross A. Scarano,  
Division of Nuclear materials Safety

SUBJECT: TERMINATED LICENSE STATUS REPORT

The purpose of this memorandum is to provide you with a status report of our review of formerly terminated sites. Our last status report was dated April 14, 1997. These sites include: (1) those involved with unsealed materials and identified as having Oak Ridge National Laboratory (ORNL) scores above five, and (2) the assigned terminated sealed source licenses. This memorandum is provided in accordance with Section 5 of Temporary Instruction 2800/026 Rev.-1, "Follow-up Inspection of Formerly-Licensed Sites Identified as Potentially Contaminated."

Considerable effort has been expended since the last report in coordinating with agreement states for turnover of licenses considered to be under their jurisdiction. Prior to the issuance of Revision 1 to TI 2800/026, Region IV notified each agreement state in writing of the sites considered to be under their jurisdiction. Mixed responses were received, with some states accepting responsibility, some refusing responsibility and some not responding. Detailed results are provided in Attachment 2 to this memorandum.

Attachment 1 (Tables A & B) summarizes the status of all licenses assigned to Region IV (Note: This includes former Region V licenses and licenses received from ORNL's Phase 3 review). Attachment 2 is a summary of files that are considered to be under Agreement State jurisdiction, and includes status of the files (i.e., forwarded to Agreement States or files awaiting acceptance by Agreement States), and includes a listing of files sent to specific states. Attachment 3 lists all terminated licenses that have thus far been recommended for removal from the active list. Attachments 4 through 7 provide summary reports of the licenses recommended for closure by Region IV since the April 1997 status report.

To the extent possible, when reviewing the sites, we considered the indicators of potential subsurface soil and groundwater contamination as described in John Austin's October 9, 1992, memorandum on that subject.

## ATTACHMENT 1

### SUMMARY OF ALL LICENSES ASSIGNED TO REGION IV

#### TABLE A

Combined Region IV/V status of sites identified by ORNL through ORNL Phase 3 review.

ORNL Score	*Total Sites	Sites Eliminated	NRC Sites Pending	Open Agreement State Sites	Contaminated **Sites
≥ 300	46	39	3	4	4
>5 <300	136	77	6	53	7
≤ 5	8	2	1	5	0
<b>Totals:</b>	<b>190</b>	<b>118</b>	<b>10</b>	<b>62</b>	<b>11</b>

\* Includes both open and close cases assigned to Region IV & the former Region V.

\*\* The contaminated sites in Region IV (including the former Region V geographic area) include the two Marquardt sites (Utah), International Mining Company (Wyoming), Dow Chemical (Texas), Standard Magnesium (Oklahoma), American Smelting and Refining Company (Texas), Reynolds Metals (Arkansas), two Isotopes Specialty sites (Calif.), Verdi Mill site (Calif.), and Aerojet site (Calif.).

#### TABLE B

Combined Region IV/V status of licenses with sealed sources (SS) not accounted for through ORNL Phase 3 review.

ORNL Score	Total SS Licenses	Eliminated	Open Agreement State SS	NRC SS Pending
≥ 300	2	0	1	1
>5 <300	96	44	26	26
≤ 5	60	17	27	16
<b>Total</b>	<b>158</b>	<b>61</b>	<b>54</b>	<b>43</b>

Note: The overall Region IV value of 348 cases assigned will not agree with ORNL's value (335 licenses) since a single license with multiple sites or with both a site and sealed source concern are entered into the Region IV database as individual cases. Also, license referrals from other regions are also tracked individually in the database. All licenses associated with the Department of the Navy were transferred to Region II for closure.

## ATTACHMENT 2

### SUMMARY OF REGION IV FILES CONSIDERED TO BE UNDER AGREEMENT STATE JURISDICTION

Listing of files, by state and type of file (site/sealed source), meeting transfer criteria to an Agreement State. The numbers in brackets are files physically shipped to a given Agreement State. Those states with an \* have refused to accept the subject files, those with \*\* indicates that the state has not responded to our letter assigning the files to them, and those with \*\*\* indicates that state wants files, but files have not been shipped to state yet.

Arizona*	4/1	Louisiana	1/2 (3)	Oregon	0
Arkansas	0	Nebraska**	1/0	Texas	3/19 (19)
California*	44/11	Nevada**	2/2	Utah*	2/3
Colorado***	5/7	New Mexico**	0/2	Washington	1/2 (3)
Kansas	0/4 (4)	North Dakota**	0/1		

(Total open Agreement State files = 116)

### **FORMER AEC/NRC FILES OF TERMINATED LICENSES TRANSFERRED TO AGREEMENT STATES**

ORNL SCORE	SEALED SOURCE	LICENSEE	LICENSE No.
<b>KANSAS</b>			
11	Yes	Ottawa University	SNM-0600
10	Yes	Wichita University	SNM-0718
10	Yes	Kansas State College	SNM-0646
10	Yes	Baker University	SNM-0451
<b>LOUISIANA</b>			
24	No	Allied Chemical Corp.	SUB-0755
13	No	Marine Cathodic Protection	C-5269
10	Yes	North American Insp Svc Inc.	17-15543-01
<b>TEXAS</b>			
217	No	Laboratory for Electronics Inc.	20-01382-15
74	Yes	Lane-Wells Company	SNM-0418
40	Yes	UT & MD Anderson Hospital	42-00434-04
37	Yes	Texas Nuclear Division	42-01485-03
12	Yes	North American Insp Svc Inc.	42-15692-01

ORNL SCORE	SEALED SOURCE	LICENSEE	LICENSE No.
12	No	LTV Inc.	STB-0352
11	Yes	Wm. Marsh Rice University	SNM-0169
6	Yes	Southwestern Radiol Svc.	42-07236-01
5	Yes	Precision Products Ltd.	42-02976-01
4	Yes	General X-ray Company	42-10857-01
4	No	Radiation Products Co.	42-09000-02
4	Yes	Southwestern Laboratories	42-01061-01
3	Yes	Texas A&M College System	SUD-0669
3	Yes	Southern Methodist Univ.	SUD-0596
2	Yes	X-Ray Services	42-05560-01
2	Yes	Industrial Welding&Testing Lab	42-00948-01
2	Yes	Industrial X-Ray Engineers	42-06108-01
1	Yes	Industrial Radiography Laboratory	42-02689-01
1	Yes	Halliburton CO/Welex Division	42-01068-05

**WASHINGTON**

63,833	Yes	*Battelle Memorial Institute	SNM-0942
7	Yes	Industrial X-Ray Engineers	46-01497-01
4	Yes	Industrial X-Ray Engineers	46-01497-03

\* Closed in this report and file sent to state for historical purposes during future decommissioning activities.

**ATTACHMENT 3**

**TERMINATED LICENSES RECOMMENDED FOR REMOVAL FROM THE ORNL LIST**  
(Listed by ORNL Score)

**FORMER REGION IV/V LICENSES**

<u>ORNL Score</u>	<u>License No.</u>	<u>Licensee Name</u>	<u>RIV Closure Date</u>
63,833	SNM-0942	Battelle Memorial Institute	*
101,511	SNM-0329	Spencer Chemical Co.	November 17, 1992
6,865	SNM-0154		November 17, 1992
9	R-0218		November 17, 1992
11,902	SNM-0031	Aerojet General Corp.	May 24, 1996
128	04-00436-02		August 8, 1995
78	SNM-0119		May 24, 1996
75 (ss)	04-00647-03		May 24, 1996
8	C-4481		January 18, 1996
7	SMB-0563		May 24, 1996
11,768	SNM-1016	McDonnell Douglas Astronautics	October 22, 1993
6 (ss)	46-11974-02		May 2, 1994
7,568	04-00580-07	Isotopes Specialties Co.	May 24, 1996
1,493	04-00580-03		May 24, 1996
3,370	SNM-0035	US Navy - NRDL	September 29, 1992
3,230	04-00487-03		April 14, 1997
36	SMB-0376		April 14, 1997
3,240	SNM-0862	General Atomics	October 22, 1993
10	SMB-0415		
2,594	SUA-0789	Vanadium Corp. of America	June 29, 1993
2,200	SUA-0712	AZ Minerals Corporation	June 29, 1993
2,950	SNM-1269	Douglas United Nuclear Inc.	September 29, 1992
529	04-00424-06		September 29, 1992
2,594	SNM-0054	General Electric Co.	August 8, 1995
144	SMB-0164		October 22, 1993
26 (ss)	SNM-0321		January 18, 1996
26 (ss)	SNM-0102		
4	SNM-0105		

\* Closure recommended herein

<u>ORNL Score</u>	<u>License No.</u>	<u>Licensee Name</u>	<u>RIV Closure Date</u>
2,520 102 85 (ss) 20 (ss)	SNM-1002 SUB-0310 04-05241-08 SNM-0483	US Nuclear Corporation	October 22, 1993
1,757	34-00472-04	Wright-Patterson AFB	October 1, 1993
1,732	SUA-0814	Vitro Corporation of America	June 29, 1993
1,642	SMA-0826	Kerr-McGee Cimarron	February 6, 1995
1,619 40 (ss)	04-02561-01 04-02561-01	Western Radiation Lab	September 29, 1992
1,175	06-02543-02	United Aircraft Corp.	January 18, 1996
1,125	04-05479-01	California Salvage Co.	October 22, 1993
1,071	SNM-00342	NORTHROP Corporation	April 14, 1997
873	SUA-0713	Susquehanna-Western	June 29, 1993
822	SUC-0793	Kerr-McGee Oil Industries	June 29, 1993
779	04-06953-01	Rad Science Corp.	October 22, 1993
749 (ss) 7 (ss)	04-00205-02 SNM-0186	Shell Development Co. Shell Oil Company	September 29, 1992 April 14, 1997
741 579 48 18 (ss)	STB-0494 STB-0434 C-3650 SNM-0425	Marquardt Corporation	May 24, 1996 February 6, 1995 June 29, 1993 May 24, 1996
547	50-10023-01	US Army - Alaska	May 10, 1995
535 (ss) 14 (ss)	SNM-0103 46-01662-03	Univ. of Washington-Seattle	September 29, 1992 October 22, 1993
518	R-0204	Radio Chemical Corp.	May 24, 1996
500	SNM-1034	Torrence Extrusion Corp.	September 29, 1992
457	04-05479-02	IT Corporation	September 29, 1992

\* Closure recommended herein

<u>ORNL Score</u>	<u>License No.</u>	<u>Licensee Name</u>	<u>RIV Closure Date</u>
482	SNM-0289	Eberline Instrument Corp.	August 31, 1992
408	SUA-0698	GeoResources Exploration, Inc.	June 29, 1993
344 30 (ss)	30-03110-02 30-03110-02	Dept. of Air Force/Kirkland AFB	June 29, 1993 June 29, 1993
335	SMB-0372	Atomics International	October 22, 1993
313	R-0183	Verdi Development Co.	May 24, 1996
330	15-00598-01	University of Kansas	October 1, 1993
249	P-3356	Missouri Metal Reduction Inc.	April 14, 1994
239	04-01043-10	Stanford Research Institute	August 8, 1995
190	R-0224	Crown Uranium Co.	October 22, 1993
187	C-4902	H&S Metal Products Co.	May 24, 1996
184	SMB-0123	Dow Chemical Company	April 14, 1994
173	SUB-0771	Nevada Freeport Storage Co.	May 10, 1995
164	04-0748-04	Reed Curtis Nuclear Industries	October 22, 1993
158	STB-0568	HALACO Engineering	April 14, 1997
143	35-00161-05	Well Surveys/Dresser Industries	February 6, 1995
143 23 (ss)	26-15267-01 26-15267-01	Omaha Public Power District	April 14, 1994
134	SNM-0280	Wyoming University	April 14, 1994
131	SUA-0649	Manidon Mining Company Inc.	April 14, 1994
125	C-4463	Quality Aircraft Co.	May 24, 1996
124	C-4462	Certified Spotwelding Corp.	May 24, 1996
123	SUB-0143	Kerr-McGee Oil Industries	April 14, 1994

\* Closure recommended herein

<u>ORNL Score</u>	<u>License No.</u>	<u>Licensee Name</u>	<u>RIV Closure Date</u>
120	SUB-0215	APEX Smelting Co.	May 24, 1996
115	R-0187	Dawn Mining Company	October 22, 1993
110	R-0150	Porter Brothers Corporation	April 14, 1994
110	31-00246-02	The W. M. Kellogg Company	April 14, 1994
24 (ss)	31-00246-02		April 14, 1994
94	P-2802	International Ranwick Ltd.	April 14, 1994
86	C-3645	H&H Parts Company	January 18, 1996
84	05-09968-01	Frank Burlingame/James Evans	February 6, 1995
84	42-05032-01	U.S. Air Force	*
83	STB-0472	Standard Magnesium/Kaiser	February 6, 1995
80	STC-0595	Wah Chang Corp.	May 2, 1994
8	C-04589		
78	42-00145-04	Humble Oil & Refining Co.	April 14, 1997
1 (ss)	42-00145-04		
75	SMB-0746	Coors Porcelain Company	February 6, 1995
72	C-04241	BMW Manufacturing Co.	May 24, 1996
65	SUB-0888	Defense Atomic Support Agency	May 24, 1996
60	STB-0511	Automation Industries, Inc.	April 14, 1997
9 (ss)	04-10858-01		
55	STC-0098	CAL-State Metals	May 24, 1996
54	C-5310	Light Metals Research Lab	January 18, 1996
51	SUC-0314	Stoddard Transfer and Fuel	April 14, 1994
48	SNM-1677	Teledyne Cast Products	May 2, 1994
40	C-4544	Skyline Engineering, Inc.	April 14, 1997

\* Closure recommended herein

<u>ORNL Score</u>	<u>License No.</u>	<u>Licensee Name</u>	<u>RIV Closure Date</u>
38	STB-0074	Basic Tool Industries, Inc.	April 14, 1997
37	53-00017-01	University of Hawaii-Honolulu	April 14, 1997
32	SNM-1471	Univ. of California-Berkeley	August 8, 1995
31 (ss)	SNM-0213		February 19, 1997
3 (ss)	SUD-0360		February 19, 1997
24 (ss)	SNM-0978	Washington State Univ.-Pullman	January 18, 1996
22 (ss)	SNM-0153		April 14, 1997
6	46-09588-13		January 18, 1996
24	C-5377	South Gate Alum. and Mag. Co.	October 22, 1993
23 (ss)	40-02331-16	South Dakota University	October 31, 1996
20	STB-0220	Southwest Airmotive Co.	April 14, 1997
17	SUB-1288	Gulf Chemical and Metallurg. Co.	April 14, 1994
17	SUB-0905	Dawn Mining/Newmont Mining	January 18, 1996
17	SNM-0162	San Diego State College	April 14, 1997
7 (ss)	SNM-0191		
3 (ss)	SUD-0341		
16 (ss)	46-07811-01	Skagit Steel and Iron	January 18, 1996
15 (ss)	50-02430-09	University of Alaska	August 8, 1995
15 (ss)	SNM-0523	Aerospace Corporation	April 14, 1997
2 (ss)	04-07326-02		
15	STB-0454	ASARCO, Federated Metals	April 14, 1997
14 (ss)	SNM-0514	California State Polytechnic	January 18, 1996
3 (ss)	SUD-0378		
14 (ss)	SNM-0265	University of Nevada-Reno	April 14, 1997
14 (ss)	SNM-0540	Valley College	April 14, 1997
13 (ss)	SNM-0480	Baylor University	April 14, 1997

\* Closure recommended herein

<u>ORNL Score</u>	<u>License No.</u>	<u>Licensee Name</u>	<u>RIV Closure Date</u>
13 (ss)	SNM-0294	Texas Women's University	April 14, 1997
13 (ss)	SNM-0673	Mandrel Industries, Inc.	April 14, 1997
13	C-0654/STB-0268	Reynolds Metals Company	January 18, 1996
13 (ss)	SNM-0482	Arkansas Polytechnic College	January 18, 1996
13 (ss)	SNM-0579	University of Arkansas-GIT	January 18, 1996
13 (ss)	SNM-0060	University of Arkansas-Chemistry	January 18, 1996
13 (ss)	SNM-0177	Occidental College	April 14, 1997
13 (ss)	SNM-0283	Pacific Union College	April 14, 1997
12 (ss)	04-07182-01		
3 (ss)	SUD-0289		
12	STC-0656	Rare Earth Uranium Mining	February 6, 1995
12	08-16855-01	Dept. of Commerce, Maritime	April 14, 1994
12	C-4066	American Brake Shoe Co.	October 22, 1993
11 (ss)	50-02197-01	State of Alaska	May 2, 1994
11	C-4656	Texas Bronze Manufacturing Co.	April 14, 1997
10	R-0203	Lucky June Mining & Milling Co.	April 14, 1997
10	STB-0188	Beech Aircraft Corporation	January 18, 1996
10 (ss)	SNM-0280	University of Wyoming	April 14, 1994
10 (ss)	SNM-0681	Harding College	January 18, 1996
10 (ss)	SNM-0619	St. Mary's University	April 14, 1997
10	SNM-0115	Amer. Radiator & Standard Sanit.	April 14, 1997
10	C-3330	Sequoia Metalcraft Co.	January 18, 1996
10 (ss)	SNM-0519	Immaculate Heart College	April 14, 1997

\* Closure recommended herein

<u>ORNL Score</u>	<u>License No.</u>	<u>Licensee Name</u>	<u>RIV Closure Date</u>
10 (ss)	04-03697-02	Culver City Hospital	April 14, 1997
10 (ss)	SNM-1122	Nevada Southern University	April 14, 1997
9	D-0683	Pacific Graphite Co., Inc.	May 24, 1996
9	C-4761	HALACO Engineering Co.	April 14, 1997
9	C-4138	The Hufford Corporation	April 14, 1997
9	D-0652	Orco Corporation	August 8, 1995
8	STB-0585	EMTEX, Missile Systems Corp.	April 14, 1997
8	C-4274	North American Aviation Inc.	May 24, 1996
8 (ss) 4 (ss)	04-0059-01 04-0059-02	Richardson X-Ray Service	January 18, 1996
7	C-4907	S & M Corporation	January 18, 1996
7	46-12754-01	U.S. Army Madigan Hospital	May 24, 1996
7 (ss)	SNM-0435	St. Edward's University	April 14, 1997
7	STB-0095	Boeing Airplane Company	January 18, 1996
6	C-4567	NORTHROP Aircraft/NORAIR	April 14, 1997
6	R-0225	American Milling Corp.	August 8, 1995
6	C-3863	Sundstrand-Denver	April 25, 1995
5	C-4991	Sundstrand Turbo	April 25, 1995
5 (ss)	43-16815-01	Rollins, Brown & Gunnell	May 24, 1996
5 (ss)	05-19361-01	Plateau Resources Limited	October 31, 1996
3 (ss)	SUD-0572	La Sierra College	April 14, 1997
3 (ss)	SUD-0316	California Institute of Tech.	April 14, 1997
3 (ss)	SUD-0552	Texas Technological College	April 14, 1997

\* Closure recommended herein

<u>ORNL Score</u>	<u>License No.</u>	<u>Licensee Name</u>	<u>RIV Closure Date</u>
3 (ss)	SUD-0246	Kansas State University	*
2 (ss)	35-19898-01	City Of Faith Medical Center	*
2 (ss)	43-07608-02	Sandy City Corporation	May 24, 1996
1 (ss)	30-04450-03	New Mexico Institute of M&T	April 14, 1997
1 (ss)	42-10083-01	Self-Organizing Systems, Inc.	April 14, 1997

\* Closure recommended herein

## ATTACHMENT 4

ORNL Score: 84

License No.: 42-005032-01

Docket No.: None Provided

Licensee: **U. S. Air Force**

License Active: April 1959 - July 1964

Location: Radiological Laboratory  
University of Texas  
Balcones Research Center  
RFD No. 4  
Austin, Texas

Activity: The broad scope byproduct license authorized Air Force possession of multiple radionuclides for use in aviation medicine research work in concert with the University of Texas. The license authorized possession of any byproduct material with Atomic Numbers between 3 and 84. The radionuclides included both sealed and non-sealed sources. The licensee also authorized the use of a 750 Curie Cobalt-60 irradiator.

### **1 ORNL Concerns**

Even though the license contained disposition of licensed material it was noted that no mention was made of disposition of research animals kept in an underground vault or whether there was any final closeout inspections or radiological survey conducted by the AEC.

### **2 Background Information**

Byproduct Material License 42-05032-01 was issued to the U.S. Air Force for use of byproduct material in a joint University of Texas and Air Force research venture in Austin, Texas (at Balcones Research Center) on April 15, 1959. Similar activities had previously been conducted at the same location using AEC License No. 42-01864, which was issued to the U.S. Air Force (Randolph Air Force Base, which expired on January 31, 1959.) Due to logistics problems with the Air Force's supervision of the aforementioned license, a new license (42-05032-01) was issued on April 15, 1959, for activities at the University of Texas's, Austin, Texas Balcones - Radiobiological Research Laboratory (former Primate Research Laboratory). The license was issued to the U.S. Air Force's Aerospace Medical Center at Brooks, AFB, Texas.

### **3 Review**

The State of Texas became an Agreement State on March 1, 1963. The University of Texas was issued Texas State License No. 4-485, on July 26, 1963. Around July 1964 the U.S. Air Force transferred all radioactive materials, including waste, to Texas Nuclear Corporation, The University of Texas, Brooks Air Force Base, and Maxy Flats radioactive waste disposal site and requested cancellation of AEC Byproduct License No. 42-05032-01. All of the recipients were licensed by either the AEC or the State of Texas and authorized to receive the materials accepted by them.

### **4 Site Status**

The University of Texas still maintains a State of Texas Broad scope Byproduct license and responsibility for the facilities referenced in the previous AEC licensed site.

### **5 Regional Recommendations**

The Region recommends the removal of this license from the ORNL formerly licensed sealed source and site list. The material previously authorized by License 42-05032-01 was transferred to either an authorizing Agreement State license or other AEC licensed entity. Any cleanup or decommissioning activities that may be required at the Balcones Research Center site will be performed under the jurisdiction of the State when the licensee submits a license termination request to the State. The U.S. Air Force still maintains an NRC issued Master Material License for controlling all their activities.

## ATTACHMENT 5

ORNL Score: 3

License No.: SUD-0246

Docket No.: 40-02730

Licensee: **Kansas State University**

License Active: May 1961 - May 1967

Location: Department of Nuclear Engineering  
Seaton Hall  
Kansas State University  
Manhattan, Kansas 66506

Activity: The license authorized the University to possess 2,500 kilograms of source material in the form of cylindrical slugs of natural uranium canned in aluminum for use in either a light-water moderated or graphite moderated subcritical assemblies.

### **1 ORNL Concerns**

No disposition was given for the 2,500 kilograms of natural uranium source material following expiration of the license in 1967.

### **2 Background Information**

On June 4, 1958, the then named Kansas State College, was issued AEC License No. CSA-4135, for possession of 1,400 kilograms of natural uranium in the form of aluminum canned slugs. The source material was to be used in construction and operation of a sub-critical assembly for educational and research purposes. In October 1958, Amendment No. 1 to CSA-4135 was issued authorizing possession of up to 2,500 kilograms of natural uranium. CSA-4135 was renewed on July 1, 1960, to expire on July 31, 1961. On April 20, 1960, the licensee's facilities were inspected to determine compliance with the following AEC licenses: CSA-4135, SNM-0216, and 15-00069-08 and -09. The inspection only identified minor posting and leak test violations. AEC License No. CSA4135 was again inspected on May 9, 1961, with no violations noted. On May 16, 1961, CSA-4135 was replaced by AEC License SUD-0246, which was to expire on May 31, 1964. SUD-0246 was inspected on January 8, 1963, with not violations noted. SUD-0246 was renewed on April 30, 1964, to expire on May 31, 1967.

### **3 Review**

Contact with the Kansas State University disclosed that the 2,498 kilograms of natural uranium was transferred to the National Lead Company of Cincinnati,

Ohio on March 23, 1976. The Reactor Manager at Kansas State University provided documentation (Form AEC-741 and shipping papers) showing that 2,498 kilograms of natural uranium was shipped to the National Lead Company on March 23, 1976 and was received by the National Lead Company on March 27, 1976. The Reactor Manager also provided documentation on the transfer of five sealed Plutonium-Beryllium neutron sources (75 grams of Pu-239 possessed under AEC License SNM-0216) to Los Alamos National Laboratory, New Mexico on November 1, 1995. It is not known under what license the 2,498 kilograms of natural uranium was maintain at the University from May 31, 1967, until it was disposed of on March 23, 1976. The University currently has a State of Kansas Broad scope byproduct license and a TRIGA Reactor license (R88). The natural uranium sealed sources have been accounted for and have been properly transferred to an authorized receiver.

**4 Sealed Source Status**

The Kansas State University has properly disposed of the material possessed under SUD-0246.

**5 Regional Recommendations**

The Region recommends the removal of this license from the ORNL formerly licensed sealed source and site lists.

## ATTACHMENT 6

ORNL Score: 2

License No.: 35-19898-01

Docket No.: 30-019491

Licensee: **City Of Faith Medical & Research Center (Oral Roberts University)**

License Active: November 1981 - November 1986

Location: 8181 South Lewis  
Tulsa, Oklahoma 74136

Activity: The NRC byproduct license authorized possession and use of various radioactive materials (mainly Xenon-133, Iodine-131, Strontium-90, and Americium-241) for medical diagnostic procedures, preparation and use of radiopharmaceuticals, blood flow and pulmonary function studies, and treatment of hyperthyroidism and cardiac dysfunction.

### **1 ORNL Concerns**

No disposition was provided for at least one sealed source (Am-241).

### **2 Background Information**

NRC Byproduct Material License 35-19898-01 was merged with NRC Byproduct License No. 35-18282-01 (Oral Roberts University) and converted to a Broad Scope Byproduct License (Research) in 1983. Sometime in 1983 NRC Byproduct License No. 35-27041-01 was issued to Memorial Medical Center & Cancer Institute (MMC&CI), Inc. which is located at 8181 South Lewis, Tulsa, Oklahoma 74136. The radioactive materials previously authorized under 35-19898-01 were transferred to license 35-0270401. All sources, except for a sealed Am-241 anatomical marker were accounted for during license activities transfers and issuance of new licenses.

### **3 Review**

Discussions with the current RSO at Memorial Medical Center & Cancer Institute (license 35-27041-01) determined that MMC&CI replaced the former City of Faith Medical & Research Center in mid 1980's. The RSO did a record search and determined that they had never possessed an Am-241 sealed source. The RSO indicated that all of the long lived radioactive materials were transferred from the City of Faith license to the MMC&CI license. A former City of Faith authorized user and current Oral Roberts University (license 35-18282-01) user, Dr. George Hartman, was contacted. Dr. Hartman in turn contacted two retired City of Faith authorized users and confirmed that the Am-241 anatomical marker source was added to the original 35-19898-01 license application only for the purpose of

having authorization to possess one in case they acquired one at a future date. Both former users stated that no Am-241 anatomical marker was ever procured.

**4 Sealed Source Status**

City of Faith Medical & Research Center site is now licensed by the NRC as Memorial Medical Center & Cancer Institute (NRC license No. 35-27041-01). License No. 35-19898-01 (former City of Faith license) was terminated on November 22, 1983, after with the issuance of Broad scope license 35-18282-01 under the name of Oral Roberts University. All sealed sources have been properly transferred and accounted for.

**5 Regional Recommendations**

The Region recommends the removal of this license from the ORNL formerly licensed sealed source and site lists. The Am-241 authorized by License 35-19898-01 was never procured.

## ATTACHMENT 7

ORNL Score: 63,833

License No.: SNM-0924

Docket No.: 70-00984

Licensee: **Battelle Memorial Institute (Pacific Northwest Lab)**

License Active: February 1966 - August 1987

Location: 3000 Stevens Drive  
Richland, Washington 99352

Activity: The licensee was authorized to possess and use millions of curies of any isotope (byproduct, source, and special nuclear materials) in any form, uranium, thorium, plutonium and other special nuclear materials for research and development purposes.

### **I ORNL Concerns**

Even though the site was turned over to regulation by Washington State the evaluator felt due to the authorization for millions of curies of material further review should be conducted to assure that there were no outstanding issues.

### **2 Background Information**

The licensee conducted wide ranging research in various buildings and laboratories at the site. There are eight docket files associated with the licensed activities occurring over the 21 years with the SNM license.

### **3 Review**

The docket files were found complete with descriptions of all SNM sources dispositions and reduction of special nuclear material inventories to below the limits imposed by 10 CFR Part 150.11.

The eight docket files associated with this license have been transferred to the State of Washington for future use in any historical reviews needed for decommissioning of the site.

### **4 Regional Recommendations**

The Region recommends the removal of this license from the ORNL formerly licensed sealed source and site lists. This site is under State of Washington license and regulation. Washington State has requested the docket file for use in future historical reviews during any decommissioning of site facilities.